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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681,064	12/15/2000	Andrew L. Bliss	MSFT-0218	9482
27372	7590	03/03/2004	EXAMINER	
WOODCOCK WASHBURN KURTZ MACKIEWICZ & NORRIS LLP ATTENTION: STEVEN J. ROCCI, ESQ. ONE LIBERTY PLACE, 46TH FLOOR PHILADELPHIA, PA 19103			YIGDALL, MICHAEL J	
		ART UNIT		PAPER NUMBER
		2122		3
DATE MAILED: 03/03/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/681,064	BLISS ET AL.
	Examiner Michael J. Yigdall	Art Unit 2122

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 15 December 2000.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-50 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-50 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 15 December 2000 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2. | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-50 are pending and have been examined. The priority date considered for the application is 15 December 2000.

Specification

2. The abstract of the disclosure is objected to because the abstract must not exceed 150 words. Correction is required. See MPEP § 608.01(b).

Claim Objections

3. Claim 13 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 12 recites “user mode debugging, kernel mode debugging, dump file debugging, and combinations thereof.” Claim 13 does not further limit claim 12, because it recites “user mode dump file debugging” and “kernel mode dump file debugging,” which are simply “combinations thereof” as already claimed in claim 12.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 41 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claimed method is ambiguous because it combines the method steps of claim 32 with a debugger, and recites several limitations and components of the debugger (“the engine including...”), which is an apparatus claim. The claim then goes on to recite additional method steps analogous to those already recited in method claim 32.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-15, 18-29, 32, 34-38, 41, 42 and 44-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,158,045 to You.

With respect to claim 1, You discloses a debugger for debugging any of a plurality of debuggees (see the title and abstract), each debuggee having a processor attribute selected from a plurality of processor attributes and representative of a type of processor associated with the debuggee (see column 72, line 55 to column 73, line 5, which shows the debuggee to have processor attributes from which the architecture or the type of the processor may be determined), the debugger being instantiated on a computer (see FIG. 1) and comprising:

(a) an engine for performing debugging functions with respect to any of the plurality of debuggees (see column 4, lines 41-50, which shows a portable debugging system having a server

debugger object or engine that is responsible for any of a plurality of debugging environments), the engine including:

(i) a plurality of debugging type blocks, each debugging type block for supporting at least one of the plurality of debugging type attributes (see column 6, lines 31-55, which shows a plurality of debugging types supported by the engine); and

(ii) a plurality of processor blocks, each processor block for supporting at least one of the plurality of processor attributes (see column 9, lines 17-26, which shows a plurality of processor attributes accounted for by the engine);

wherein a particular debugging type block and a particular processor block are selected for debugging a particular debuggee based on the debugging type attribute and processor attribute of the particular debuggee (see column 9, lines 28-33, which shows implementing an engine for a particular host environment, i.e. for a debuggee having a particular debugging type and particular processor attributes).

Although You discloses support for a plurality of debugging types (see column 6, lines 31-55) and a plurality of processor families or types (see column 9, lines 17-26), as well as attributes of the debuggee used to represent the processor type (see column 72, line 55 to column 73, line 5), You does not expressly disclose the limitation wherein each debuggee has a debugging type attribute selected from a plurality of debugging type attributes and representative of a type of debugging to be performed with respect to the debuggee.

However, it would have been apparent to one of ordinary skill in the art at the time the invention was made for each debuggee to include a debugging type attribute, in addition to the processor attributes, to designate a particular debugging type. Such an addition would, for

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example, enable the engine to perform the designated type of debugging without demanding a manual selection by the user.

With respect to claim 2, You further discloses the limitation wherein the plurality of debugging type blocks are organized into a debugging type abstraction available to provide debugging type services that vary in implementation for each debugging type (see column 10, lines 4-7, which shows that the portable debugging system uses abstraction, and column 9, lines 28-33, which shows that particular implementations may vary).

With respect to claim 3, You further discloses the limitation wherein the debugging services include services selected from a group consisting of accessing memory, accessing context, accessing system information, inserting a breakpoint, removing a breakpoint, controlling execution, and combinations thereof (see column 10, lines 20-27, which shows the data exchanged between the debugging client and server for services such as stack or memory access, runtime or context information, breakpoints, and so on).

With respect to claim 4, You further discloses the limitation wherein the debugging type abstraction comprises programming code, and wherein at least a portion of the programming code for the debugging type abstraction is common as between at least some debugging type blocks and is shared by such debugging type blocks (see column 10, lines 29-40, which shows using C++ programming code and template classes to reuse or share common interfaces).

With respect to claim 5, You further discloses the limitation wherein the programming code for the debugging type abstraction is organized into a tree form with generic code at a base

node and more specific levels of code branching out at nodes therefrom, each debugging type block including at least one node from the tree (see FIG. 9, which shows the abstraction tree for address-related code; note that a similar tree would apply to the debugging type).

With respect to claim 6, You further discloses the limitation wherein the plurality of processor blocks are organized into a processor abstraction available to provide processor services that vary in implementation for each processor (see column 10, lines 4-7, which shows that the portable debugging system uses abstraction, and column 9, lines 28-33, which shows that particular implementations may vary).

With respect to claim 7, You further discloses the limitation wherein the processor services include services selected from a group consisting of recognizing particular processor instructions, recognizing processor states, maintaining hardware breakpoints, assembling code for the processor, disassembling code from the processor, disassembling code from a dump file produced by the processor, and combinations thereof (see column 10, lines 20-27, which shows the data exchanged between the debugging client and server for services such as register or processor state information, breakpoints, hardware exceptions, and so on).

With respect to claim 8, You further discloses the limitation wherein the processor abstraction comprises programming code, and wherein at least a portion of the programming code for the processor abstraction is common as between at least some processor blocks and is shared by such processor blocks (see column 10, lines 29-40, which shows using C++ programming code and template classes to reuse or share common interfaces).

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With respect to claim 9, You further discloses the limitation wherein the programming code for the processor abstraction is organized into a tree form with generic code at a base node and more specific levels of code branching out at nodes therefrom, each processor block including at least one node from the tree (see FIG. 9, which shows the abstraction tree for address-related code; note that this tree applies to the processor type).

With respect to claim 10, You further discloses the limitation wherein the engine further includes a high level portion for issuing generic requests to the selected debugging type block and to the selected processor block to accomplish debugging actions (see FIG. 2 and column 9, lines 28-45, which shows the high-level client interface used for issuing generic requests to a particular debugging server implemented for a particular debugging type and processor).

With respect to claim 11, You further discloses the limitation wherein the plurality of debugging type blocks are organized into a debugging type abstraction available to provide debugging type services that vary in implementation for each debugging type, wherein the plurality of processor blocks are organized into a processor abstraction available to provide processor services that vary in implementation for each processor, and wherein the high level portion issues generic request to the debugging type abstraction and to the processor abstraction to accomplish debugging actions (see column 10, lines 4-7, which shows that the portable debugging system uses abstraction; see also see FIG. 2 and column 9, lines 28-45, which shows the high-level client interface used for issuing generic requests to a particular debugging server implemented for a particular debugging type and processor).

With respect to claim 12, You further discloses the limitation wherein the plurality of debugging type attributes supported by the debugging type blocks include debugging type attributes representative of members selected from a group consisting of user mode debugging, kernel mode debugging, dump file debugging, and combinations thereof (see column 6, lines 31-55, which shows a plurality of debugging types supported by the engine; note that symbolic or source-level debugging is analogous to user mode debugging, interactive debugging is analogous to kernel mode debugging, and non-interactive debugging, particularly postmortem debugging, is analogous to dump file debugging).

With respect to claim 13, You further discloses the limitation wherein the plurality of debugging type attributes supported by the debugging type blocks further include debugging type attributes representative of members selected from a group consisting of user mode dump file debugging, kernel mode dump file debugging, and combinations thereof (see column 6, lines 31-55, which shows a plurality of debugging types supported by the engine; note that symbolic or source-level debugging is analogous to user mode debugging, interactive debugging is analogous to kernel mode debugging, and non-interactive debugging, particularly postmortem debugging, is analogous to dump file debugging).

With respect to claim 14, You further discloses the limitation wherein the plurality of processor attributes supported by the processor blocks include processor attributes representative of members selected from a group consisting of an X86 processor family, an ALPHA processor family, and IA64 processor family, and combinations thereof (see FIG. 9, which shows support for X86 and 64-bit processor families, among others).

With respect to claim 15, You further discloses the limitation wherein the debugger further has an executable for being executed by a user, for calling the engine, and for providing an interface between the user and the engine (see column 9, lines 28-45, which shows the client interface executed by a user for calling a particular debugging server or engine).

With respect to claim 18, You further discloses the limitation wherein the particular debuggee is a dump file produced by a processor operating in a particular mode, wherein the debugging type attribute of the dump file corresponds to the particular mode, and wherein the particular debugging type block of the engine selected for debugging the dump file supports the debugging type attribute of the dump file (see column 6, lines 31-55, which shows the debugging types supported by the engine, including postmortem debugging for inspecting the state of a program after it terminates, for example by using a dump file; note that the program state saved in the dump file would identify the processing mode, for example with an attribute).

With respect to claim 19, You further discloses the limitation wherein the particular debuggee is a dump file produced by a type of processor, wherein the processor attribute of the dump file corresponds to the type of processor, and wherein the particular processor block of the engine selected for debugging the dump file supports the processor attribute of the dump file (see column 6, lines 31-55, which shows the debugging types supported by the engine, including postmortem debugging for inspecting the state of a program after it terminates, for example by using a dump file; note that the program state saved in the dump file would identify the type of processor, for example with an attribute; see also column 9, lines 17-26, which shows a plurality of processor attributes accounted for by the engine).

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With respect to claim 20, the claim recites the same limitations and features recited in claim 1. See the explanation for claim 1 set forth above.

With respect to claim 21, the claim recites the same limitations and features recited in claim 2. See the explanation for claim 2 set forth above.

With respect to claim 22, the claim recites the same limitations and features recited in claim 4. See the explanation for claim 4 set forth above.

With respect to claim 23, the claim recites the same limitations and features recited in claim 5. See the explanation for claim 5 set forth above.

With respect to claim 24, the claim recites the same limitations or features recited in claim 6. See the explanation for claim 6 set forth above.

With respect to claim 25, the claim recites the same limitations and features recited in claim 8. See the explanation for claim 8 set forth above.

With respect to claim 26, the claim recites the same limitations and features recited in claim 9. See the explanation for claim 9 set forth above.

With respect to claim 27, the claim recites the same limitations and features recited in claim 10. See the explanation for claim 10 set forth above.

With respect to claim 28, the claim recites the same limitations and features recited in claim 11. See the explanation for claim 11 set forth above.

With respect to claim 29, the claim recites the same limitations and features recited in claim 15. See the explanation for claim 15 set forth above.

With respect to claim 32, You discloses a method comprising:

(a) determining, for a particular debuggee, a debugging type attribute of the particular debuggee (see column 6, lines 31-55, which shows a plurality of debugging types supported by the debugging system; see also column 9, lines 28-33, which shows determining information from the host or debuggee such as, for example, the debugging type);

(b) selecting a particular debugging type block of an engine of a debugger for debugging the particular debuggee based on the determined debugging type attribute (see column 9, lines 28-33, which shows implementing or selecting an engine for a particular host environment, i.e. for a debuggee having a particular debugging type);

(c) determining, for the particular debuggee, a processor attribute of the particular debuggee (see column 9, lines 17-26, which shows a plurality of processor attributes accounted for by the engine; see also column 72, line 55 to column 73, line 5, which shows determining, for a particular debuggee, the architecture or the type of the processor);

(d) selecting a particular processor block of the engine of the debugger for debugging the particular debuggee based on the determined processor attribute (see column 9, lines 28-33, which shows implementing or selecting an engine for a particular host environment, i.e. for a debuggee having particular processor attributes); and

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(e) employing the selected debugging type block and the selected processor block to debug the particular debuggee (see column 9, lines 28-45, which shows using a client interface for employing a debugging server or engine to debug a particular debuggee).

With respect to claim 34, You further discloses the limitation wherein determining the processor attribute comprises sensing a particular type of processor from the debuggee (see column 72, line 55 to column 73, line 5, which shows determining or sensing the type of processor from the debuggee).

With respect to claim 35, You further discloses the limitation wherein determining the debugging type attribute comprises sensing a particular type of debugging from the debuggee (see column 6, lines 31-55, which shows a plurality of debugging types supported by the debugging system; see also column 9, lines 28-33, which shows determining or sensing information from the debuggee such as, for example, the debugging type).

With respect to claim 36, You further discloses employing a high level portion of the engine of the debugger to issue generic requests to the selected debugging type block and to the selected processor block to accomplish debugging actions (see FIG. 2 and column 9, lines 28-45, which shows the high-level client interface used for issuing generic requests to a particular debugging server implemented for a particular debugging type and processor).

With respect to claim 37, You further discloses the limitation wherein employing the high level portion comprises issuing generic requests from the high level portion to a debugging type abstraction and to a processor abstraction to accomplish debugging actions, the debugging type

abstraction comprising a plurality of debugging type blocks and being available to provide debugging type services that vary in implementation for each debugging type, the processor abstraction comprising a plurality of processor blocks and being available to provide processor services that vary in implementation for each processor (see column 10, lines 4-7, which shows that the portable debugging system uses abstraction; see also see FIG. 2 and column 9, lines 28-45, which shows the high-level client interface used for issuing generic requests to a particular debugging server implemented for a particular debugging type and processor).

With respect to claim 38, You further discloses running an executable of the debugger in response to a command from a user, the executable for calling the engine and for providing an interface between the user and the engine (see column 9, lines 28-45, which shows the client interface executed by a user for calling a particular debugging server or engine).

With respect to claim 41, You further discloses a debugger for debugging any of a plurality of debuggees (see the title and abstract), each debugger having a processor attribute selected from a plurality of processor attributes and representative of a type of processor associated with the debugger (see column 72, line 55 to column 73, line 5, which shows the debugger to have processor attributes from which the architecture or the type of the processor may be determined), the debugger having an engine for performing debugging functions with respect to any of the plurality of debuggees (see column 4, lines 41-50, which shows a portable debugging system having a server debugger object or engine that is responsible for any of a plurality of debugging environments), the engine including:

(i) a plurality of debugging type blocks, each debugging type block for supporting one of the plurality of debugging type attributes (see column 6, lines 31-55, which shows a plurality of debugging types supported by the engine); and

(ii) a plurality of processor blocks, each processor block for supporting one of the plurality of processor attributes (see column 9, lines 17-26, which shows a plurality of processor attributes accounted for by the engine).

You further discloses:

(a) determining, for a particular debuggee, the debugging type attribute of the particular debuggee (see column 6, lines 31-55, which shows a plurality of debugging types supported by the debugging system; see also column 9, lines 28-33, which shows determining information from the host or debuggee such as, for example, the debugging type);

(b) selecting a particular debugging type block for debugging the particular debuggee based on the determined debugging type attribute (see column 9, lines 28-33, which shows implementing or selecting an engine for a particular host environment, i.e. for a debuggee having a particular debugging type);

(c) determining, for a particular debuggee, the processor attribute of the particular debuggee (see column 9, lines 17-26, which shows a plurality of processor attributes accounted for by the engine; see also column 72, line 55 to column 73, line 5, which shows determining, for a particular debuggee, the architecture or the type of the processor);

(d) selecting a particular processor block for debugging the particular debuggee based on the determined processor attribute (see column 9, lines 28-33, which shows implementing or

selecting an engine for a particular host environment, i.e. for a debuggee having particular processor attributes); and

(e) employing the selected debugging type block and the selected processor block to debug the particular debuggee (see column 9, lines 28-45, which shows using a client interface for employing a debugging server or engine to debug a particular debuggee).

Although You discloses support for a plurality of debugging types (see column 6, lines 31-55) and a plurality of processor families or types (see column 9, lines 17-26), as well as attributes of the debuggee used to represent the processor type (see column 72, line 55 to column 73, line 5), You does not expressly disclose the limitation wherein each debuggee has a debugging type attribute selected from a plurality of debugging type attributes and representative of a type of debugging to be performed with respect to the debuggee.

However, it would have been apparent to one of ordinary skill in the art at the time the invention was made for each debuggee to include a debugging type attribute, in addition to the processor attributes, to designate a particular debugging type. Such an addition would, for example, enable the engine to perform the designated type of debugging without demanding a manual selection by the user.

With respect to claim 42, the claim recites analogous limitations and steps to those recited in claim 32. See the explanation for claim 32 set forth above. Note that You also discloses a computer-readable medium having computer-executable instructions thereon, the instructions being organized into modules (see the title and abstract).

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With respect to claim 44, the claim recites analogous limitations and steps to those recited in claim 34. See the explanation for claim 34 set forth above.

With respect to claim 45, the claim recites analogous limitations and steps to those recited in claim 35. See the explanation for claim 35 set forth above.

With respect to claim 46, the claim recites analogous limitations and steps to those recited in claim 36. See the explanation for claim 36 set forth above.

With respect to claim 47, the claim recites analogous limitations and steps to those recited in claim 37. See the explanation for claim 37 set forth above.

With respect to claim 48, the claim recites analogous limitations and steps to those recited in claim 38. See the explanation for claim 38 set forth above.

8. Claims 16, 17, 30, 31, 33, 39, 40, 43, 49 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over You as applied to claims 15, 29, 32, 38, 42 and 48 above, respectively, and further in view of U.S. Pat. No. 5,533,192 to Hawley et al. (hereinafter Hawley).

With respect to claim 16, although You discloses support for a plurality of debugging types (see column 6, lines 31-55), You does not expressly disclose the limitation wherein the executable includes an attribute that results in the selection of a particular debugging type block in the engine.

However, Hawley discloses an attribute in the executable used to select a particular debugger (see information 811 in FIG. 8a, which comprises the attribute; see also step 853 in

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FIG. 8b and column 19, lines 12-22), in a debugging system having a plurality of debuggers (see the title and abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include, in the You system, an attribute as taught by Hawley, for the purpose of selecting the appropriate debugger, i.e. the appropriate debugging type block, in the absence of an alternative selection by the user (see Hawley, column 18, lines 26-37).

With respect to claim 17, although You discloses support for a plurality of processor families or types (see column 9, lines 17-26), You does not expressly disclose the limitation wherein the executable includes an attribute that results in the selection of a particular processor block in the engine.

However, Hawley discloses an attribute in the executable used to select a particular debugger (see information 811 in FIG. 8a, which comprises the attribute; see also step 853 in FIG. 8b and column 19, lines 12-22), in a debugging system having a plurality of debuggers (see the title and abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include, in the You system, an attribute as taught by Hawley, for the purpose of selecting the appropriate debugger, i.e. the appropriate processor block, in the absence of an alternative selection by the user (see Hawley, column 18, lines 26-37).

With respect to claim 30, the claim recites the same limitations and features recited in claim 16. See the explanation for claim 16 set forth above.

With respect to claim 31, the claim recites the same limitations and features recited in claim 17. See the explanation for claim 17 set forth above.

With respect to claim 33, You does not expressly disclose the limitation wherein determining the debugging type attribute comprises receiving a selection of a particular type of debugging from a user.

However, Hawley discloses receiving a selection from a user for a particular debugger, i.e. for a particular type of debugging (see step 851 in FIG. 8b and column 18, lines 38-64), in a debugging system having a plurality of debuggers (see the title and abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to obtain, in the You system, a user selection as taught by Hawley, for the purpose of enabling the user to specify his or her preference for a particular debugger or type of debugging (see Hawley, column 18, lines 38-64).

With respect to claim 39, although You discloses support for a plurality of debugging types (see column 6, lines 31-55), You does not expressly disclose the limitation wherein the executable includes an identification of the debugging type attribute of the debuggee, and selecting the particular debugging type block in the engine based on the identification.

However, Hawley discloses an identification in the executable used to select a particular debugger (see information 811 in FIG. 8a, which comprises the identification; see also step 853 in FIG. 8b and column 19, lines 12-22), in a debugging system having a plurality of debuggers (see the title and abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include, in the You system, an identification as taught by Hawley, for the purpose of selecting the appropriate debugger, i.e. the appropriate debugging type block, in the absence of an alternative selection by the user (see Hawley, column 18, lines 26-37).

With respect to claim 40, although You discloses support for a plurality of processor families or types (see column 9, lines 17-26), You does not expressly disclose the limitation wherein the executable includes an identification of the processor attribute of the debuggee, and selecting the particular processor block in the engine based on the identification.

However, Hawley discloses an identification in the executable used to select a particular debugger (see information 811 in FIG. 8a, which comprises the identification; see also step 853 in FIG. 8b and column 19, lines 12-22), in a debugging system having a plurality of debuggers (see the title and abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include, in the You system, an identification as taught by Hawley, for the purpose of selecting the appropriate debugger, i.e. the appropriate processor block, in the absence of an alternative selection by the user (see Hawley, column 18, lines 26-37).

With respect to claim 43, the claim recites analogous limitations and steps to those recited in claim 33. See the explanation for claim 33 set forth above.

With respect to claim 49, the claim recites analogous limitations and steps to those recited in claim 39. See the explanation for claim 39 set forth above.

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With respect to claim 50, the claim recites analogous limitations and steps to those recited in claim 40. See the explanation for claim 40 set forth above.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Pat. No. 5,548,717 to Wooldridge et al. discloses a system for debugging within a multi-architecture environment.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Yigdall whose telephone number is (703) 305-0352. The examiner can normally be reached on Monday through Friday from 8:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (703) 305-4552. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJY

Michael J. Yigdall
Examiner
Art Unit 2122

mjy
February 26, 2004

[Signature]
TUAN DAM
SUPERVISORY PATENT EXAMINER